

addition, claims 25-28 have been amended to address the rejection thereof under 35 U.S.C. § 112, second paragraph. Claim 1 has been amended to incorporate all of the limitations set forth in claim 2. As claim 1 was indicated to be allowable if amended in the foregoing manner (i.e., incorporating the limitations of claim 2), it is respectfully submitted that claim 1 and claims 3-5, which are dependent on claim 1, are now in condition for allowance.

Applicants note with appreciation the indication of allowance of claims 11-13. Applicants further note that claims 18-23 were included in the group of claims indicated to contain patentable subject matter, but objected to for depending on a rejected claim. However, claims 18-23 depend from claim 11, either directly or indirectly. Thus, as claim 11 was indicated to be allowable, it is submitted that claims 18-23 are also in condition for allowance.

Finally, it is noted that claims 6 and 14 have been amended in an effort to clarify the intended subject matter of the present invention. Support for the amendments to claims 6 and 14 can be found, for example, in Figs. 6a and 6b and the corresponding portion of the specification.

II. The Rejection Of Claims 25-28 Under 35 U.S.C. § 112, Second Paragraph

Claims 25-28 were rejected under 35 U.S.C. § 112, second paragraph, for being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. In response, Applicants have amended claims 25-28 so as to provide a proper antecedent basis for the term metal conductors. It is respectfully submitted that,

as amended, claims 25-28 provide a proper antecedent basis for all limitations set forth therein, and therefore satisfy all requirements of 35 U.S.C. § 112, second paragraph.

III. The Rejection Of The Claims Under 35 U.S.C. § 102

Claims 1, 4-7, 14 and 24 were rejected under 35 U.S.C. § 102 as being anticipated by USP No. 6,143,116 to Hayashi. For the following reasons, Applicants respectfully submit that the pending claims are patentable over Hayashi. It is noted that claim 1 is in condition for allowance based on the incorporation of claim 2 as noted above. Accordingly, only claims 6 and 14 are discussed below, as these are the only independent claims remaining under rejection.

Claims 6 and 14 relate, for example, to the embodiment of the present invention shown in Figs. 6A and 6B. As shown therein, and as recited by the rejected claims, the insulation layers in which the vias are formed comprise an insulating substrate and at least one adhesive layer. Referring to Fig. 6A, the at least one adhesive layer 104 is formed on a first surface of the insulating substrate 106, where the first surface is one of an upper surface or a lower surface of the insulating substrate. Of course, it is also possible to form the adhesive layers on both the upper and lower surface of the insulating substrate (see, adhesive layers 104 and 105 in Fig. 6A). As a result, the portions of the wiring layer overlying the insulating substrate are in contact with the adhesive layer (assuming an adhesive layer is disposed on the given side of the substrate).

Turning to the cited prior art, and referring to Fig. 4D thereof, Hayasa discloses

an insulating substrate 13 having vias 14 and wiring patterns 16. Importantly, however, it does not appear that Hayasa discloses the use of adhesive layers formed on top of at least one surface of the insulating substrate 13. Indeed, it does not appear that Hayasa discloses the use of such an adhesive layer at all. As noted on col. 13, lines 26-30 of Hayasa, the wiring patterns 16 are formed on transfer sheets 15 and then "press-adhered" to the insulating substrate. (Once the wiring pattern is transferred, the transfer sheet is removed.)

Accordingly, as anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, **Kalman v. Kimberly-Clark Corp.**, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983), for at least the foregoing reasons, it is clear that Hayasa does not anticipate either amended claim 6 or 14, or any claim dependent thereon.

IV. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, **Hartness International Inc. v. Simplimatic Engineering Co.**, 819 F.2d at 1100, 1108 (Fed. Cir. 1987).

Accordingly, as claims 6 and 14 are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also in condition for allowance.

V. Request For Notice Of Allowance

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.


Respectfully submitted,

McDERMOTT, WILL & EMERY

Date:

12/27/02

By:


Michael E. Fogarty
Registration No. 36,139

600 13th Street, N.W. , Suite 1200
Washington, D.C. 20005-3096
Telephone: 202-756-8000
Facsimile: 202-756-8087
WDC99 686592-1.056937.0027